

REMARKS/ARGUMENTS

After the foregoing Amendment, claims 1 and 3-14 are currently pending in this application. Claims 1 and 6 are amended. In the specification, paragraph [0029.1] is amended to provide reference numerals to new Figure 7. New Figure 7 has been added to show every feature of the invention specified in the claims pursuant to 37 C.F.R. 1.183(a). Figures 1 and 2 have been amended to label them as prior art. New Figure 7 has been added.

Claim Rejections – 35 U.S.C. §112

Claims 1 and 3-14 stand rejected under 35 U.S.C. §112 as failing to comply with the written description requirement. Claims 1 and 6 were rejected for containing new subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that at the time the application was filed, the inventors had possession of the claimed invention.

The objected subject matter "the timeslot that has an opposite transmission direction in a current cell/sector than a transmission direction in the handover cell/sector is not assigned" has been amended to "a timeslot

that has a different direction in the current cell/sector than the handover cell/sector is not assigned".

Support for this amendment is found in paragraph [0029.1], which recites:

In the event the two cells involved in the soft handover have different downlink/uplink timeslot allocations, the F-DCA should preferably not consider the timeslots that are used in different directions by the two cells when allocating timeslots resources to the WRTU in soft handover.

Claim Rejections - 35 USC §103(a)

Claims 1 and 3-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0083069 to Vadgama (hereinafter "Vadgama") in view of U.S. Patent No. 6,473,602 to Bottomley (hereinafter "Bottomley") and further in view of U.S. Patent No. 5,882,313 to Malek et al. (hereinafter "Malek").

Regarding claim 1, Vadgama discloses soft handover where the congestion of a cell is considered in addition to the cell's signal quality to determine if handover should occur. When a mobile unit moves from one cell to another, it may take advantage of overlapping cell coverage to increase signal quality (paragraph [0076]). Vadgama teaches maintaining a list of

active base stations which are involved in a soft handover; however, Vadgama is silent on the soft handover process regarding how it affects individual timeslots. The broadcast channel of a base station may indicate which timeslots are available in that cell (paragraph [0094]). When a mobile unit indicates the base station ID number that it is communicating with, a non-communicating base station will leave timeslots that would otherwise have been allocated to data packets from the buffer empty (paragraph [0125]). But Vadgama does not disclose a method of selecting timeslots in a handover cell that are not being used in a current cell.

Bottomley discloses a mobile assisted handover system (MAHO) where a mobile station will be idle for several timeslots during each frame and the unused timeframes are available for making MAHO measurements (column 2, lines 10-16). Bottomley teaches distinguishing certain timeslots based on whether the timeslot is transmitting a control channel or a data channel, because a control channel may be transmitted at a higher power level than the data channel, thereby providing an inaccurate indication of the signal strength (column 5, lines 6-19). Bottomley uses timeslots for making cell signal quality measurements and uses the measurements to communicate cell status between the base stations and the mobile units. But Bottomley does not teach using timeslots not being used by a current cell to

communicate with a handover cell. Bottomley does not use the two sets of timeslots for transmitting the same data from two base stations as claimed. Bottomley transmits data from the base station in one or more timeslots, and then uses idle timeslots for managing signal status information for use in making handover determinations.

Malek discloses a seamless handover between base stations in where transmissions are made in the original timeslot and a handover time slot within the same frame (Abstract). The base stations in Malek transmit and receive slots and frames in synchronization (column 2, lines 49-53). However, Malek does not teach not assigning a timeslot in a handover cell/sector that has a different transmission direction than the timeslot in the current cell/sector. In a system where certain timeslots are reserved for uplink and other timeslots are reserved for downlink in a cell and one cell is using a particular timeslot for uplink, another cell may using the same timeslot for downlink. If the two cells are selected for soft handover the WTRU participating in handover is forced to both transmit to the first cell and receive data from the second cell in the same timeslot. Therefore, the WTRU has to code and transmit to the first cell and receive and decode from the second cell at the same time. To ensure the most efficient use of the WTRU's processing resources, claim 1 prevents the assignment of a timeslot to the

handover cell where the handover cell has the timeslot reserved for a transmission direction different than the transmission direction of that timeslot in the current cell. This is an improvement to soft handover not disclosed or suggested in any of the cited references. For the reasons presented above, claim 1 is not obvious in view of Vadgama, Bottomley, and Malek. Claim 6 is not obvious in view of the cited references for the same reasons provided regarding claim 1.

Claims 3-5 and 7-14 are dependent upon claims 1 and 6, respectively, and the Applicants believe these claims are allowable over the cited references for the same reasons provided above.

Based on the arguments presented above, withdrawal of the 35 U.S.C. §103(a) rejection of claims 1 and 3-14 is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephonic interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

Applicant: Cave et al.
Application No.: 10/748,775

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

Cave et al.

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